[0039] The pattern for each subsequent image is responsive to a pattern of a previous image shifted in the flow directions by the magnitudes of the pixels. The pattern may also vary as a function of variance in the flow or other alterations of the pattern to account for static or dynamic changes. Where one or more patterns associated with a plurality of locations are shifted in whole, any portions of the pattern falling outside of locations associated with flow are discarded.

[0040] Figures 5A and 5B show one example of generating a perceptual stream by persisting a pattern shifted as a function of the flow. The image 52 of Figure 5B is displayed subsequent to the image 50. The image 52 includes a vessel 54 with a pattern generated for areas associated with flow within the vessel 54. As shown in Figures 5A and 5B, the pattern is graphically represented by dots, slashes and plus signs. While such patterns may be used, the pattern is used herein for ease of description. By viewing either of Figures 50 or 52 alone, the pattern provides little flow information. Alternatively, the pattern varies as a function of flow parameters within a single image. When viewed in sequence, the patterns show a shift associated with flow. For example, the individual slashes and dots at the edges of the vessel 54 are shown to shift by approximately two grid points. Linear shifts, shifts of individual pixels, shifts of groups of pixels or other shift groupings may be used. The center of the vessel associated with more rapid flow shows an increased shift of about three grid points. For example, the plus sign on the left side of the slashes in Figure 5A is on the right side of the slashes in Figure 5B after a shift to the right by both the slashes and pluses.

[0041] While the entire area associated with flow is provided with a pattern in Figures 5A and 5B, alternative embodiments include a pattern for only a portion of the spatial locations associated with flow. For example, a circular, oblong, square, or other regular or irregular shape area associated with flow but less than all areas associated with flow is identified. The pattern is generated for the identified area or the area is the pattern. The pattern is then shifted as discussed herein as a function of display time. For example, Figure 3 shows a circular area shifting between the images 38 and 40. While the area is shifted, the pattern within the